

PAT-NO: JP361052589A

DOCUMENT-IDENTIFIER: JP 61052589 A

TITLE: AIR-TO-AIR HEAT EXCHANGER

PUBN-DATE: March 15, 1986

INVENTOR-INFORMATION:

NAME

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ASSIGNEE-INFORMATION:

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NIPPON DENSO CO LTD

COUNTRY

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APPL-NO: JP59174287

APPL-DATE: August 22, 1984

INT-CL (IPC): F28F001/32

ABSTRACT:

PURPOSE: To contrive to improve the heat transfer performance and the buckling strength of fin and to reduce the draft loss by a structure wherein each slat of a louver attached to a fin is made in a form bent in the cross-section in the direction of air flow and the direction of bend in slats of the louver attached to one fin is set reverse to that in slats of the louver attached to the other fin opposing to said fin.

CONSTITUTION: Each slat 10a of a louver attached to a fin has a form bent in the cross-section in the direction of air flow. The direction of bend in slats of the louver attached one fin is set reverse to that in slats of the louver attached to the fin vertically adjacent to said fin. The air flow 6 flows smoothly between slats 10a vertically adjacent to each other as indicated with the arrows 6e without developing phenomena such as separation of flow from slats, vortices and the like. Accordingly, no air flow is hindered and the air

is cooled effectively.

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PAT-NO: JP359147995A

DOCUMENT-IDENTIFIER: JP 59147995 A

TITLE: FINNED HEAT EXCHANGER

PUBN-DATE: August 24, 1984

INVENTOR-INFORMATION:

NAME

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ASSIGNEE-INFORMATION:

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APPL-NO: JP58023284

APPL-DATE: February 14, 1983

INT-CL (IPC): F28F001/32

US-CL-CURRENT: 165/181

ABSTRACT:

PURPOSE: To improve the heat exchanger capacity of the heat exchanger by a method wherein circulation interrupting sections are provided at the rear ends of plate-like fins which form slit-like or louver-like openings with a number of slitted and formed strips so that the generation of a bypass flow of a fluid or the interference among the slitted and formed strips are controlled.

CONSTITUTION: The fins 1 are provided with fin collars 1b to be fitted on a heat transfer pipe 2. Further, the fine collars 1b of one half of the fins 1 are formed in a direction making an angle of  $(90^\circ - \alpha)$  with respect to the surface of each of the fins 1 and provide the louver-like openings 4 with the slitted and formed strios 3 formed in the opposite direction. On the other hand, the fin collars 1b of the remaining half of the fins 1 are formed in a direction making an angle of  $(90^\circ + \alpha)$  with respect to the surface of each of the fins 1 and provide the louver-like openings 4 in the same

direction. In addition, each of the fin collars 1b is formed in such dimensions that it serves as a distance piece when it has been fitted on the heat transfer pipe 2 and the front and rear ends of the adjoining plates fins 1 are overlapped each other with respect to the fluid flow direction so that it is possible to form the circulation interrupting sections 5 for the fluid W flowing between the adjoining plate fins.

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